

WATER MAIN SUBMITTAL INSTRUCTIONS:

The following is a listing of information that must be submitted when requesting an approval of a water main extension.

1. One set of plans sealed by a professional engineer. (Three sets when submitted in conjunction with facilities.)
2. One set of specifications; unless the community has specifications on file with the Department of Natural Resources or is using Standard Specifications for Sewer and Water Construction in Wisconsin. If specifications are submitted they must be sealed by a professional engineer and the specifications sections of this checklist must be completed. (Three sets when submitted in conjunction with facilities.)
3. A map or sketch showing the location of the proposed extension(s) in relation to the rest of the distribution system.
4. An approval letter from the owner of the distribution system; unless the applicant is employed or retained by the waterworks owner.
5. One completed water main extension submittal checklist.

All sections of this checklist must be completed for every submittal; excepting, that if specifications are on file for the municipality or standard specifications are to be used the section under specifications may be omitted. If it is felt that a question on the checklist does not apply to a particular extension, indicate this with N/A and explain the reason.

Water main extensions submitted in conjunction with facilities (i.e., wells, elevated tanks, pumping stations, etc.) will be reviewed as part of the facility and will not be eligible for a "fast track" review unless the extensions are submitted separately. New systems also will not be eligible for a "fast track" review. However, a checklist must be completed for all water main extensions.

Notice: This form is authorized by ss. 281.11, 281.19(1) and (2) and 280.11, Wis. Stats., and ss. NR 108.04(2)(a) and NR 811.13(1)(h)(3), Wis. Adm. Code. Completion of this form or a similar form approved by the Department is mandatory. Failure to submit a completed form to the Department is punishable: by a forfeiture of not less than \$10 nor more than \$5,000; or by a fine of not less than \$10 or more than \$100 or imprisonment of not more than 30 days, or both. Each day of continued violation is a separate offense (ss. 299.97 and 280.97, Wis. Stats.). Personally identifiable information on this form will be used for no other purpose.

Name of Municipality/Sanitary District, Other	Clerk or Contact Name
-----------------------------------------------	-----------------------

Mailing Address

Name/Number of Project

Specifications

Water mains will be constructed in accordance with (check one):

- ☐ 1. Standard Specifications for Sewer and Water Construction in Wisconsin (_____ Edition)
- ☐ 2. Standard specifications for municipality already on file with DNR
Approval number for specifications _____ Date of approval _____
- ☐ 3. Specifications submitted with the plans (fill out the following section)

(A) Pipe Material [NR811.62]	Applicable Standard	Class	Pressure Rating
Ductile Iron ()	_____	_____	_____
Polyethylene HDPE ()	_____	_____	_____
Polyvinyl Chloride ()	_____	_____	_____
PVCO ()	_____	_____	_____
Other _____ ()	_____	_____	_____

(B) Minimum depth of cover [NR811.66(2)(e)]	_____
---------------------------------------------	-------

- | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-----------------------------|
| (C) Pressure/Leakage testing equivalent to AWWA stds? [NR811.66(2)(c)] | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (D) Disinfection procedure equivalent to AWWA C 651? [NR811.66(2)(d)] | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (E) Safe microbiological samples required prior to placing water mains in service? [NR811.66(2)(b)] | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (F) Blocking/reaction backing required at hydrants, tees, bends, etc.? [NR811.66(2)(f)] | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| (G) Installation procedures (bedding, backfill, making joints, etc.) meet AWWA or manufacturer's specifications [NR811.66(1), NR811.61(2)(a), NR811.61(2)(b)] | <input type="checkbox"/> Yes | <input type="checkbox"/> No |

Water Main Extension Submittal Checklist

Form 3300-66 (R 7/01)

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- (H) Valve Type: ☐ Gate ☐ Butterfly ☐ Other
- (I) Hydrants: [NR 811.64] Hydrant bottom valve size _____ Size of outlets _____
- | | | |
|-------------------------------------|------------------------------|-----------------------------|
| Automatic drain | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Gravel pocket for drain | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Connecting main size of at least 6" | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
| Gate valve on connecting main | <input type="checkbox"/> Yes | <input type="checkbox"/> No |
- (J) Should these specifications be retained on file as standard specifications for this municipality? ☐ Yes ☐ No

Design Specifics

- Minimum horizontal (center to center) separation distance between water main and existing or future sanitary sewer _____ ft., storm sewer _____ ft. Minimum horizontal separation distance between fire hydrants and sanitary or storm sewers _____ ft. [NR811.67(2), NR811.64(4)]
- Where water mains cross over sewers, the minimum vertical separation distance (edge to edge) is _____ inches. Where water mains cross under sewers, the minimum vertical separation distance (edge to edge) is _____ inches. [NR811.67(3)]
- Will a common trench be used in any portion of the project? [NR811.67(2)(a) & (2)(b)] ☐ Yes ☐ No
If yes:
 - Is the rock elevation shown on the plans? ☐ Yes ☐ No ☐ N/A
 - Minimum horizontal separation between water main and sewer? _____
 - Minimum vertical separation between water main and sewer? _____
 - Is a cross section of the common trench shown on the plans? ☐ Yes ☐ No ☐ N/A
- What is the minimum horizontal separation between the water main and
 - a septic tank, septic tank drainfield, lift station, or grave site? _____
 - a buried fuel tank? _____
 - a sanitary landfill? [NR811.68] _____
- Does the municipality have an erosion control ordinance? ☐ Yes ☐ No
If yes, will compliance with the ordinance be required for this project? ☐ Yes ☐ No
 - Do the plan sheets show the erosion control provisions? ☐ Yes ☐ No
 - Do the specifications require that the erosion control measures be in place before construction begins and be maintained during construction? ☐ Yes ☐ No
- Are valves provided at each intersection and at intermediate points so spacing does not exceed 800 feet? [NR811.63(b)] ☐ Yes ☐ No
If no, explain: _____

- Are hydrants provided at each intersection and at intermediate points so spacing does not exceed 600 feet? [NR811.64(11)] ☐ Yes ☐ No
If no, explain: _____

- Are hydrants or other flushing devices capable of flow velocities of at least 2.5 feet per second in the water main installed downstream of the last service at all dead-ends? [NR811.63(5)] ☐ Yes ☐ No
If no, explain: _____

9. If groundwater may rise above hydrant drain ports, will the drain ports be plugged and operational procedures established for pumping the hydrant barrels dry during freezing weather? [NR811.64(4)] ☐ Yes ☐ No ☐ N/A

If no, explain: _____

10. Is there a history of external corrosion problems with buried pipe in the project area? [NR811.62] ☐ Yes ☐ No

If yes, explain proposed protection measures: _____

11. Do the proposed water mains pass through or adjacent to a landfill or chemical spill area that may adversely impact the piping material or gaskets? [NR811.68(3)] ☐ Yes ☐ No

The Department typically requires use of Thickness Class 52 Ductile Iron Pipe water main, polyethylene wrap, plugging of hydrant drain ports, and nitrile gaskets as minimum responses to contaminated soils or groundwater. Use of fluorocarbon gaskets may be required in some instances. Construction of water mains through or near areas of soil and groundwater contamination should be avoided where possible.

If yes, has the Department been contacted to determine what type of protection for the water main should be used? ☐ Yes ☐ No

12. Do the proposed water mains pass through a wetland area? [NR811.13(3)(h)] ☐ Yes ☐ No

If yes:

(A) Is the extent of the wetlands shown on the plans? ☐ Yes ☐ No

(B) Is a copy of the Army Corps of Engineers 404 permit included? ☐ Yes ☐ No

If no, explain: _____

Be aware it is Department policy to discourage construction through wetlands if practical alternatives exist. To satisfy the goals of this policy, the Department requests that you attach a justification for construction through a wetland that also includes discussion of other alternatives.

(C) Is justification for the construction through a wetland attached? ☐ Yes ☐ No

13. Do the proposed water mains pass through a floodway or floodplain? [NR811.13(3)(h)] ☐ Yes ☐ No

If yes, is the regional (100 year) flood elevation indicated on the plans? ☐ Yes ☐ No

14. Does installation of the proposed water mains involve construction within 500 feet of the ordinary high water mark or over or under or in waters of the state? ☐ Yes ☐ No

If yes:

(A) Has the DNR regional water management coordinator been contacted for a Chapter 30 permit determination? ☐ Yes ☐ No

Name and phone number of contact: _____

(B) Was it determined that a Chapter 30 permit is needed? ☐ Yes ☐ No

If yes, is a copy of the Chapter 30 permit attached? ☐ Yes ☐ No

15. If plans are submitted by someone other than the waterworks owner or authorized representative, is written acceptance of the waterworks owner included? [NR811.14] ☐ Yes ☐ No ☐ N/A

If no, explain: _____

16. Do the proposed water main extensions involve any surface water crossings over 15 feet? [NR811.69] ☐ Yes ☐ No

If yes:

(A) If the crossing is an underwater crossing: Is a minimum of 2 feet of cover provided? ☐ Yes ☐ No

Does the pipe have flexible watertight joints?

☐ Yes ☐ No

Have valves been provided at both ends of the crossing with one valve in a manhole and permanent taps installed within the manhole to allow for the installation of a water meter?

☐ Yes ☐ No

If no, explain: _____

(B) If the crossing is a bridge crossing: Is the pipe insulated?

☐ Yes ☐ No

Are expansion joints provided?

☐ Yes ☐ No

Have valves been provided at both ends of the crossing?

☐ Yes ☐ No

If no, explain: _____

17. Do the proposed water main extensions involve any common casing crossings? [NR811.70]

☐ Yes ☐ No

If yes:

(A) Is the water main located above the sewer?

☐ Yes ☐ No ☐ N/A

(B) Minimum vertical separation distance (edge-to-edge) between the water main and sewer?

(C) Is the sewer extension within the casing a gravity or force main?

(D) What type of material will the sewer be constructed of?

(E) What type of joints will the sewer have?

(F) Is a cross-section of the casing included on the plans?

☐ Yes ☐ No ☐ N/A

18. Anticipated pipe material _____, thickness class _____, and type of joint _____.
(May omit if unknown at time of submittal). [NR811.62]

19. Will proposed water mains serve existing structures having private wells? [NR811.10]

☐ Yes ☐ No

If yes, does the water system owner have rules or ordinances that require the abandonment of unused private wells and that prohibit cross-connections with the public water supply system where private wells are permitted to remain in service?

☐ Yes ☐ No

20. Will installation of the water main(s) include dewatering well construction having a total capacity exceeding 70 gallons per minute?

☐ Yes ☐ No

If yes, has Department approval been obtained for construction of dewatering well(s)?

☐ Yes ☐ No

Approval Number: _____ Date: _____

If no approval has been obtained, explain: _____

21. Onsite inspection of the proposed water main construction will be provided by: [NR811.15]

☐ Engineering firm ☐ Owner Other (specify) _____

22. Normal static pressures throughout the area to be served will range from

_____ to _____ PSI [NR 811.60(1) & NR 811.63]

23. The area to be served is: ☐ Residential ☐ Commercial ☐ Industrial [NR 811.63(6) & NR 811.64(5)]

24. Calculate the minimum fire flow at any proposed hydrant. [NR811.63(1)]

Fire Flow Test

Location of residual hydrant: _____

Fire Flow Test (continued)

Location of flowing hydrant: _____

Distance between flowing and residual hydrants: _____ feet.

Static Pressure at residual hydrant: _____ PSI Elevation of residual hydrant: _____ ft.

Flow test results: _____ GPM at a residual pressure of _____ PSI

Conversion of flow test to 500 GPM equivalent yields 500 GPM @ _____ PSI

Calculations

Location of critical hydrant: _____

Distance between critical and residual hydrants: _____ ft.

Roughness coefficient ("c" factor): _____ Elevation of critical hydrant: _____ ft.

Head loss due to friction: _____ PSI Head loss/gain due to elevation: _____ PSI Total head loss: _____ PSI

Calculated available fire flow at critical hydrant is 500 GPM at _____ PSI.

(Attach additional sheets if necessary.)

For computer generated models, output must include all losses, assumed flows, roughness coefficient, pipe lengths, pipe diameters, and a node map.

25. Water mains

Diameter (inches)	Length (feet)	Street name and/or easement description [NR811.61]
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Additional Comments

Further comments on any previous items (please use additional sheets if necessary).

Certification

I certify that I have examined the above information and found it to be correct, true and complete.

Signature of Professional Engineer	Date Signed
Name of Professional Engineer (Please Print)	Telephone Number (include area code)
Wis. P.E. Number	FAX Number (include area code)